

Claims:

1. A Grouped Optical Add Drop Multiplexer (GOADM) comprising a periodic filter for forming a group of optical wavelengths to be dropped or added.
2. The Grouped Optical Add Drop Multiplexer (GOADM) according to Claim 1, for dropping or adding a group of optical wavelengths from/to a spectrum of optical wavelengths transmitted over an incoming optical line so that adjacent optical wavelengths in the spectrum are initially spaced from one another by a basic step " $s$ ", the GOADM comprises said periodic filter insertable in the incoming optical line as a primary filter to produce said group of optical wavelengths where adjacent wavelengths of the group are spaced from one another by a group step being equal to  $ks$ , wherein  $k$  is an integer  $>1$ .
3. The GOADM according to Claim 1, provided with one or more secondary filters connected to said periodic filter serving a primary filter, wherein each of said secondary filters is responsible of dropping or adding one particular wavelength from said group.
4. The GOADM according to Claim 1, comprising an ADD module and a DROP module, wherein the DROP module comprises a first said periodic filter serving as a primary DROP periodic filter and connected to a first assembly comprising one or more secondary DROP filters each responsible of separating a particular wavelength from the group, and wherein the ADD module comprises a second said periodic filter serving as a primary ADD periodic filter and connected to a second assembly

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comprising one or more secondary ADD filters each responsible of picking a particular wavelength for the group.

5. The GOADM according to Claim 4, wherein said first periodic filter and said second periodic filter are one and the same periodic filter enabling simultaneous operation of said two modules.

6. The GOADM according to Claim 1, wherein said periodic filter is tunable.

7. The GOADM according to Claim 6, provided with one or more secondary filters connected to said periodic filter serving a primary filter, the secondary filters being automatically tunable in response to tuning of the periodic filter.

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